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Notice of Allowability	Application No.	Applicant(s)	
	09/606,939	KIMURA ET AL.	
	Examiner	Art Unit	
	Justin R Fischer	1733	

-- **The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 26 April 2004.
2. ☒ The allowed claim(s) is/are 2,3,5-7,9-15 and 19-24 (renumbered 1-18).
3. ☒ The drawings filed on 30 June 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Allowable Subject Matter

1. Claims 2, 3, 5-7, 9-15, and 19-24 (renumbered 1-18) are allowed. The following is an examiner's statement of reasons for allowance:

It is well known in the tire industry to anchor the terminal end of carcass plies in the bead regions in order to eliminate the occurrence of separation failure and thereby improve tire durability. In these instances, the carcass ply is wound around the respective bead cores such that the terminal ends of the carcass plies are adjacent the outer peripheral portions of the bead cores and thus in close proximity to the main carcass portion. Furthermore, it is known to include a wide variety of bead reinforcing layers to optimize the rigidity distribution within the bead regions, it being recognized that the bead regions are exposed to a great deal of stress during running. The closest prior art references of record that incorporate both of these features are Powell (GB 1,000,113) and Maeda (JP 1030808). In particular, the tire construction of Powell, as best depicted in Figure 1, is expressly described as having a carcass and a bead-reinforcing layer formed of steel reinforcing elements [Maeda, on the other hand, suggests that steel is a recognized high strength material but is not desired in his particular heavy-duty construction (teaches use of aramid fiber cords in carcass)]. However, Powell fails to teach, disclose, or suggest the specific arrangement of the at least steel cord reinforcing layers as set forth in independent claims 2, 11, and 20 and such an arrangement would not have been obvious in view of the prior art references of record.

As to claim 2, the claim requires a first steel cord reinforcing layer that is axially inward of and adjacent the main carcass portion and turned up around the bead core and a second steel cord reinforcing, wherein the main carcass portion is sandwiched between said first and second steel cord reinforcing layers. While it would have been obvious to "turnup" the steel cord reinforcing layer 8 of Powell, as set forth in the previous rejections, there is no suggestion to include a second steel cord reinforcing layer, let alone a second steel cord reinforcing layer that is disposed between the main carcass portion and the bead filler such that the above noted "sandwich" arrangement is achieved.

With respect to claim 11, the prior art references of record failed to suggest the arrangement of a cushion rubber between a steel cord reinforcing layer and a main carcass portion in combination with the specific bead construction defined by the claimed invention (steel cord reinforcing layer arranged on axially inner and outer side of bead cores and carcass ply has wound portion that contacts outer peripheral surface of bead core). One of ordinary skill in the art at the time of the invention would not have found it obvious to include the aforementioned rubber layer in Powell since it is recognized that there is a specific interaction between the axially inner (in relation to the bead core) cushion rubber and the wound carcass design that was not suggested by the prior art references of record.

Regarding claim 20, in a similar manner to claim 2, there is no suggestion in Powell to include a first and a second steel cord-reinforcing layer. In these instances, the claim requires a first steel cord-reinforcing layer (axially innermost of all reinforcing

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layers) that is arranged along the main carcass portion and has a terminal end that is radially outward of the bead core and a second steel cord-reinforcing layer (radially innermost or downside of all reinforcing layers) that is wound around the respective bead cores. This specific arrangement of bead reinforcing layers, in combination with the specific arrangement of the carcass in relation to the bead, would not have been obvious to one of ordinary skill in the art at the time of the invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

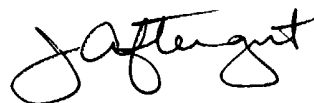
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Justin Fischer

June 23, 2004



JEFF H. AFTERGUT
PRIMARY EXAMINER
GROUP 1300